

# **WA-Trans Business Needs Document**

October 22, 2002

## **Introduction**

This document outlines the business needs identified for the Washington Transportation Framework Project (WA-Trans). It provides high-level context information and then business needs in enough detail that business requirements may then be derived. The needs are identified by the function which will use them. The documentation includes the source of the identified need as well as the specific partners who may share the need or contribute to meeting the need. Business needs are defined as economic drivers for participating in the activity of developing WA-Trans. They also are beneficial outcomes of WA-Trans if it is designed to facilitate meeting the various business needs

## **Background**

The transportation framework is one theme of the total framework concept. In the 1990s it was recognized that the cost of producing Geographical Information Systems (GIS) data was prohibitively high and that duplicate data was proliferating. In an effort to be more efficient the framework concept was born for GIS in the Federal Geographic Data Committee (FGDC) of the United States Geological Survey (USGS). There are several themes, of which transportation is one. Other themes identified by the FGDC include elevation and bathymetry, hydrography, geodetic control, cadastral, government units and orthoimagery. The goal is for these themes to work together to provide a complete picture of the geographic data.

The Washington Geographic Information Council (WAGIC) has sponsored efforts to work on specific themes in the state of Washington. Efforts have been made in the cadastral, hydrography and orthoimagery themes. The transportation effort is not a new one, but it has new momentum with a full-time project manager and a new effort at formally defining business needs, requirements and functional specifications. This document defines business needs.

## **Vision**

The Washington State Transportation Framework is a seamless set of data that are consistent, connected, and continuous between segments of the transportation framework and with other framework layers. The transportation framework represents the best data available and includes mechanisms to improve over time. Framework data is accessible to the general public at the least cost with the least restrictions.

## **Business Opportunity**

It is expected that this document will completely outline the different business opportunities. These opportunities can be divided into specific business functions. Functions which derive a business opportunity for the transportation framework include: Transportation Planning, Emergency Management Planning, Emergency Management Routing, Transportation Project Scoping, Transportation Project Design, Transportation Project Construction, Transportation Operations, Transportation Maintenance, Emergency First Response, Environmental Impact Analysis, Freight Routing, and others. WA-Trans will allow for sharing of data and reduce the duplication of data. It will also facilitate data consistency across the state.

## **Value Provided to Customer**

The customer will have access to data regarding various modes of transportation including roads, rails, airports, ferry terminals and routes and ports for the whole state. They will have the ability to attach their own data to this so they can see their data in relationship to the statewide transportation systems. The customer will be able to rely on transportation data outside their own jurisdiction when developing applications. The framework will provide a standard, which will facilitate data exchange. The ability to do this exchange will increase business opportunity and reduce costs of duplicate data production and data inconsistency.

## **Business Risk**

A complete separate risk assessment is being developed and maintained. Some key risks include: Lack of stakeholder participation leading to a standard and framework that won't be used, lack of resources and funding at key stages to complete the work, making the framework serve too many specialized functionalities, thus leading to high risk of failure or a framework which is too specialized to be universally useful. There are many other risks that are included in the risk assessment. The major risk of not developing this framework is the significant cost of duplication of data, the costs resulting from incorrect data, and the lost opportunity of being unable to utilize cross jurisdictional data in a cost effective manner for applications.

## **Assumptions**

1. Sufficient partners representing data providers and data users participate in the project. The exact number is uncertain, but there should be a representative participation from the various groups who will be primary data providers and/or primary business users of the product.
2. Funding and resources are available from partner organizations for a project manager, data modeling, software development and maintenance.
3. Key staff resources with the necessary technical ability are available and can be scheduled to complete project tasks. While it is not yet possible to completely define the technical ability required it is assumed that when this is defined the ability will exist to provide or acquire these resources.
4. Agreement can be reached on a common data model.
5. Agreement can be reached on a common linear referencing system if one is needed.
6. Technical capabilities of the software, hardware, and resources are available to support business needs.
7. A phased approach will be utilized to develop the framework incrementally.
8. Existing infrastructure will be used to make transportation framework data accessible.
9. The transportation framework project and other framework projects will be coordinated.
10. The first implementation of the framework will be simple and a plan will exist for increasing complexity and functionality over time.
11. Sufficient business value will be discovered and documented to compel participation in building, using and maintaining the WA-TRANS.
12. Pilot test results will represent the statewide situation enough to use these results to determine approaches.
13. When pilots are successful the results will become part of the framework implementation.

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14. Negotiation, compromise and facilitation will be utilized to arrive at implementation priorities. Funding source may be considered a key issue in deciding such priorities.
15. A steering committee will be organized for the project that will have the authority in their individual organizations to access resources and possibly funds to assist with the various phases of the project. The size of this steering committee will be dependant upon what is required to get adequate representation for different business areas. However at this time it is hoped that steering committee will be limited to 13 members including the project manager.
16. Membership of the steering committee may change as phase deliverables change.
17. The steering committee will be able to participate to the level of providing detailed analysis and decision-making about business requirements, functional requirements and prioritization of requirements. The steering committee will also be available at least once a month for meetings in order to facilitate change management and issue management.
18. The steering committee will be representative of the Washington Transportation Framework Stakeholder Group.
19. The steering committee will be small enough to facilitate effective decision-making.
20. Any project plans for implementation will include plans and funding sources for maintenance of what is implemented.
21. WAGIC and FMG will assist with pursuing funding.

## **Scope and Limitations**

### ***Scope of the Initial Release***

To be determined by the WA-Trans Steering Committee.

### ***Scope of Subsequent Releases***

To be determined by the WA-Trans Steering Committee.

### ***Limitations and Exclusions***

To be determined by the WA-Trans Steering Committee.

## **Customer Profiles**

The project has various customers, which have been identified. There have been several customer categories identified. However, this data has wide usefulness and many potential customers may remain unidentified. Specific customers participating or providing input to this document both outside and in WSDOT are identified. Customers identified so far include:

### ***Federal Agencies include:***

- US Bureau of Land Management,
- US Bureau of Indian Affairs
- US Census Bureau,
- Federal Highway Administration,
- US Forest Service,
- National Parks Service
- US Geological Survey.

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### ***Washington State Agencies and organizations include:***

Center to Bridge the Digital Divide at WSU,  
County Road Administration Board,  
Department of Natural Resources,  
Eastern Washington University Tribal Technical Assistance Program  
Enhanced 911,  
State Parks,  
Utilities and Transportation Commission,  
Washington Geographic Information Council (WAGIC),  
Framework Management Group,  
Strategic Freight Transportation Analysis Project (SFTA),  
Freight Mobility Strategic Investment Board (FMSIB)  
Information Services Board Geographic Information Technology Subcommittee  
Department of Transportation (WSDOT),

### ***Divisions or functions within WSDOT specifically interested at this time include:***

Bridge Preservation Office,  
Design Office,  
Emergency Management Office,  
Environmental Affairs Office,  
Government Liaisons (Tribal Liaison),  
Highways and Local Programs,  
Interactive Transportation Systems (TRAC),  
Program Management Office  
Planning Office,  
Public Transportation Office,  
Rail Office,  
Regional Project Engineers office (Scoping function),  
Transportation Data Office (TDO),  
Transportation Demand Management Office,  
T2 Program,  
Urban Corridors,  
WSF Council for Disaster Planning,  
WSF Terminal Engineering.

### ***Tribal Nations include:***

The Makah Nation (input only).

### ***Local organizations include:***

Association of Washington Cities,  
City of Spokane,  
City of Monroe,  
City of Seattle,  
City of Tacoma,

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Clallam County,  
Clark County,  
Community Transit (Snohomish County),  
Douglas County, Island County,  
Ferry County,  
King County Emergency Management,  
King County Metro (T-Net Project),  
Kitsap Transit,  
Lincoln County,  
Mason County,  
Pend Orielle County,  
Pierce County,  
Port of Seattle,  
Puget Sound Regional Council,  
Spokane County,  
Thurston County,  
Yakima County,  
Walla Walla County.

### ***Private Organizations include:***

Environmental Systems Research Institute Inc. (ESRI),  
Longview Fibre,  
RF Weston,  
Washington Forest Protection Association.

## **Project Priorities**

To be set by WA-Trans Steering Committee.

## **Project Success Factors**

### ***Establish broad participation.***

Identify and recruit partners who:  
Can identify a business case for investing in the transportation framework,  
Represent a range of uses of the database,  
Are needed to create full data coverage.

### ***Establish standards, which enhance the will and ability of partners to collect and maintain the data.***

Match the standard to the ability of the partners to collect and maintain the data.  
Identify a standard which allows data quality to improve over time.  
Identify funding incentives for partners to participate.

### ***Provide the data needed to meet business and analytical needs.***

Data must be:  
Accurate.

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Complete.  
Not too complicated to use.  
Described and documented.  
Up-to-date.  
Relevant to business and analytical needs.  
Data must be digital  
Formatted in open standard, relational structure  
Able to be imported into commercial digital mapping systems.

### ***Define a data model that partners agree meets their needs.***

Identify business needs and functional requirements, and define the data needed to support them.  
Examine existing data models.  
Seek consensus agreement on the data model. Partners commit to achieving consensus.  
Provide frequent and on-going communication of progress and decisions to partner organizations.

### ***Identify the right standards and processes.***

Identify standards and processes needed to meet business needs.  
Examine existing standards and processes.  
Identify standards and processes needed to facilitate integration of data from multiple sources.  
Identify standards and processes, which facilitate maintaining the data long term.

### ***Identify standards and processes that recognize the capabilities of existing technology to support the standards and processes.***

Identify standards and processes that recognize the capabilities of existing technology to support the standards.  
Provide tools for data integration, data access, and metadata.

### ***Phased Development***

Set the scope of phases to allow delivery of tangible products within a set time frame.  
Use phases as a method of showing an effort and plan to meet all business needs while focusing on the ones, which can most realistically be met at the current time.

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### Business Needs

The business needs are defined as high level needs described in business terms. Each business needs is documented as follows:

**BN #:** This is a number assigned to each business need. At this point these number are subject to change. When stakeholders approve business needs as substantially complete or correct a “permanent” number will be assigned with room to insert new numbers if needed.

**Title:** The title is a short descriptive name used to identify the need.

**Description:** This is a description of the business needs described in business language to be understandable to most who may read it. It includes enough detail to extract business requirements from.

**Business Functions Using:** This is a list of generic business functions which may use WA-Trans to assist in meeting this need. It is not defined by specific organizations.

**Source:** The provider of the original business needs identified.

**Specific Partner Use:** This is similar to the “Business Function Using” except it identifies a specific partner involved in WA-Trans who may find using WA-Trans to assist with meeting this need useful.

#### ***BN: 1.0***

##### **Title**

Communication of Survey Data

##### **Description**

Project Engineers involved in scoping and designing a project (transportation infrastructure) would like to know what areas have been surveyed by county and local governments and other parts of WSDOT and access to that data to avoid resurveying the same area.

##### **Business Function Using**

Public works, Transportation construction projects, Transit Organizations

##### **Source**

WSDOT Olympic Region Lacey Project Engineers Office

##### **Specific Partners Use**

WSDOT, County Governments, City Governments, Transit Organizations

#### ***BN: 2.0***

##### **Title**

Future Plans for Transportation Infrastructure

##### **Description**

Organizations need to know the plans of other organizations regarding building or modifying transportation infrastructure including sidewalk plans as soon as they were estimated and this

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data needs to be geocoded. Information needs to include road segment or structure involved. This would facilitate communication and help planning in a more proactive and mutually supporting way. This includes projects on the State Transportation Improvement Plan (STIP), and the various Transportation Improvement Plans (TIP) and Tribal TIPs.

### **Business Functions Using**

Public works, transportation construction projects, business developers, emergency planning and response, transit organizations, data collection organizations

### **Source**

WSDOT Olympic Region Lacey Project Engineers Office, WSDOT Environmental Affairs Office, WSDOT Olympic Region Highway and Local Programs Engineer, WSF Terminal Engineering Office, WSDOT Highways and Local Programs, Seattle Dept. of Transportation, EWU TTAP

### **Specific Partners Use**

WSDOT (Project Scoping, Project Design, Highways and Local Programs, Environmental Affairs, WSF), County and City Governments, E-911, MPOs and RTPOs, FHWA, Bureau of Census, Tribal Nations

### **BN: 3.0**

### **Title**

Railroad Line Information

### **Description**

A variety of information about rail lines is needed. Included in this is: track locations,  
Where tracks intersect roads,  
What type of crossing controls there are at intersection,  
Safety rating of intersection,  
Whether the track is abandoned or active,  
Location of rail bridges, tunnels and potential mud slides locations along railways,  
Ownership of rail lines (specific tracks).  
Where tracks intersect streams (BOC)  
Location of Inter-modal Loading Facilities (Truck-Rail, or Rail-Barge)

### **Business Functions Using**

Public Works, transportation construction projects, planning, emergency response, transportation infrastructure maintenance, long term transportation planning, emergency management, data collection, rail organizations, freight and freight analysis

### **Source**

WSDOT Olympic Region Lacey Project Engineers Office, WSDOT Rail Office, WSDOT Bridge Preservation Office, SFTA



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### **Specific Partners Use**

WSDOT (TDO, Transportation Planning, Project Scoping, Bridge Preservation, Maintenance and Operations, Rail Office), County and City Governments, E-911, WUTC, PSRC, Bureau of Census, SFTA, King County Emergency Management

### ***BN: 4.0***

#### **Title**

Communication of Recently Completed Projects Along the Roadway

#### **Description**

Data on specific projects recently completed which could be queried by a specific time frame and location.

#### **Business Functions Using**

Public works, transportation construction projects, business developers, emergency response, transit organizations

#### **Source**

WSDOT Olympic Region Lacey Project Engineers Office, WSDOT Urban Corridors Office, Seattle Dept. of Transportation

### **Specific Partners Use**

WSDOT. County and City Governments, E-911, MPOs and RTPOs, FHWA, USGS

### ***BN: 5.0***

#### **Title**

Routing

#### **Description**

There is a need for evaluating and mapping alternate routes for a variety of functions on all roads including county, city, state and private roads. This includes the need to buffer an affected area for analysis. This would be used for emergency management, traffic control, homeland security, Freight Congestion, Infrastructure Impact Analysis and Transportation construction projects. There is also a need to communicate alternate routes to the public.

#### **Business Functions Using**

Public works, transportation construction projects, emergency management, transit organizations, military, public utilities

#### **Source**

WSDOT Olympic Region Lacey Project Engineers Office, WSDOT Emergency Response, WSDOT Olympic Region Highway and Local Programs Engineer, WSF Terminal Engineering, Seattle Public Utilities, SFTA

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### **Specific Partners Use**

WSDOT, County and City Governments, E-911, Freight Mobility Strategic Investment Board (FMSIB), SFTA

### ***BN: 6.0***

#### **Title**

Impervious Surfaces Analysis Data

#### **Description**

Information that facilitates calculating impervious surfaces along existing roadways such as pavement type, surface area and other related things would assist with the impervious surface permits. There is additional data needed that may not be part of WA-Trans. This data is covered in the section of data needs from other frameworks.

#### **Business Functions Using**

Public works, transportation construction projects, transit

#### **Source**

WSDOT Environmental Affairs Office, Seattle Dept. of Transportation

### **Specific Partners Use**

WSDOT, County and city governments, Transit organizations, SFTA, FMSIB

### ***BN: 7.0***

#### **Title**

Water Crossings Roadways (maybe Rails as well)

#### **Description**

Locations of water crossing on roadways including permanent and intermittent water including 100 year flows of streams and rivers. This data is used for scoping and design of highway projects. This may be considered hydro data but relates to culverts and bridges.

#### **Business Functions Using**

Public works, transportation construction projects, environmental permitting organizations, business developers

#### **Source**

WSDOT Environmental Affairs Office, WSDOT State Design Office

### **Specific Partners Use**

WSDOT, County and city governments

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### ***BN: 8.0***

#### **Title**

Facilitates Collision Analysis using Transportation System

#### **Description**

There is a need to provide analysis of roadway collisions based upon the whole roadway system surrounding the incidents including off and on ramps, roads signals, and structures connecting to the roadway. **May involve roads and infrastructure outside of a specific jurisdiction.**

#### **Business Functions Using**

Transportation planning, emergency response, transit, data collection

#### **Source**

WSDOT Olympic Region Highway and Local Programs Engineer, WSDOT Transportation Data Office

#### **Specific Partners Use**

WSDOT, MPOs, RTPOs, Public Works, Emergency Management, FHWA, Transit Organizations

### ***BN: 9.0***

#### **Title**

20-Year Transportation Plan Development

#### **Description**

Developing a 20-year plan involves using transportation plans data statewide as well as a variety of other data. This other data will be included in the data sections of this document.

#### **Business Functions Using**

Transportation planners, urban planners, private developers, government agencies, program managers

#### **Source**

WSDOT Planning, WSDOT Olympic Region Highway and Local Programs Engineer, WSF Terminal Engineering

#### **Specific Partners Use**

WSDOT, MPOs and RTPOs, CRAB, County and city organizations, SFTA, FMSIB

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### ***BN: 10.0***

#### **Title**

Tracking Activities along Transportation Network by Organizations without Jurisdictional Responsibility

#### **Description**

The specific need identified was stated as “Knowing when and where utilities plan to work so we can combine paving efforts.” This can be extended into know plans regarding work on or alongside any transportation feature that is not being done by the organization which generally maintains that feature.

#### **Business Functions Using**

Public works, transportation maintenance and operations

#### **Source**

WSDOT Olympic Region Highway and Local Programs Engineer

#### **Specific Partners Use**

WSDOT, county public works, city public works

### ***BN: 11.0***

#### **Title**

Communicating Improvements to the Roadway

#### **Description**

This was stated as a “need to know when another agency or developer makes improvements on a state highway system. This information is captured if the improvement is connected to an interstate or if they use WSDOT to award the contract. Otherwise the information isn’t captured.” This could be extended to needing to know when ANY organization makes an improvement to ANY road on the network. This actually encompasses maintenance, accuracy and timeliness of data.

#### **Business Functions Using**

Transportation planning, scoping, design, maintenance, operations, urban planning, private business planning, emergency management, emergency response

#### **Source**

WSDOT Olympic Region Highway and Local Programs Engineer, WSDOT Transportation Data Office, Seattle Dept. of Transportation

#### **Specific Partners Use**

WSDOT, County and City Public Works, MPOs and RTPOs, CRAB, SFTA, FMSIB

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### ***BN: 12.0***

#### **Title**

Statewide Base Map to use in Communication

#### **Description**

There is a need for a statewide base map that extends beyond jurisdictional boundaries to illustrate scenic byways and provide communication for funding with the legislature, local partners, and the Federal Government.

#### **Business Functions Using**

Transportation planning, public communications, financial management of transportation projects

#### **Source**

WSDOT Olympic Region Highway and Local Programs Engineer, WSDOT Program Management, WSDOT Rail Office

#### **Specific Partners Use**

WSDOT, County and City Public Works, MPOs and RTPOs

### ***BN: 13.0***

#### **Title**

Coordination of Transportation During Emergency

#### **Description**

In the Washington State Comprehensive Emergency Response Plan it is WSDOT's responsibility to coordinate all transportations (all modes, all routes) for the state. The Agency must collect information about closures and routing. During the Nisqually Quake the Governor asked for maps including alternate routes. There is a need for a method of collecting, storing and illustrating areas of closure and alternate routes. This requirement can be extended to include a mechanism for storing and communicating all closures in various situations including terrorist attacks, natural disasters or construction.

#### **Business Functions Using**

Emergency management and response, transportation maintenance, transportation operations, transit organizations, military

#### **Source**

WSDOT Emergency Response, WSF Council for Disaster Planning. King County Emergency Management

#### **Specific Partners Use**

E-911, WSDOT, county and city governments, King County Emergency Management

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### ***BN: 14.0***

#### **Title**

Transportation Infrastructure Vulnerability Assessment

#### **Description**

There is a need to perform vulnerability assessments on transportation infrastructure statewide based on critical risk. It must breakdown each feature by ownership, then functionality, and then relationship to other things (ex. emergency routes, etc.) It must look at multi-hazard vulnerabilities. Then an alternative analysis must be performed. WA-Trans could be the basis for such an assessment and used to continually update the assessment based on new risk models and new data.

#### **Business Functions Using**

Emergency management and response, transportation operations, transportation planning, risk management

#### **Source**

WSDOT Emergency Response, WSF Council for Disaster Planning

#### **Specific Partners Use**

WSDOT, county and city governments, King County Emergency Management

### ***BN: 15.0***

#### **Title**

Facilitate Bridge Data Sharing Between Various Road Authorities

#### **Description**

There is a variety of bridge data needed statewide. The WSDOT Bridge Preservation Office is federally mandated to report on bridges statewide. The extent of this mandate includes city, county, state and some privately owned bridges with public traffic. They are responsible for inspections on regular inventory, which includes big interchanges, bridges over dry gulches, other raised highways and anything over water and all tunnels. They are responsible for movables, and specialized structures such as the Narrows and floating bridges. They need to know the following about bridges:

Location of bridges and structures (tunnels, etc),

Cross streets close to bridges,

Stream or water body names,

Proximity of bridge to railroad,

Mechanism to share bridge inspection status, type, frequency, due dates, whether navigable water, location with counties and cities,

Need structural bridge information from counties which shows up on statewide map

Need information from local governments to assist in bridge prioritization for repair or retrofit in situation of disaster (ex. earthquake) where many may need to be repaired/retrofitted at once.

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Need information about egress routes into tribal lands and structures on them  
Need data from Federal Government about backcountry bridges for their inventory  
Cities and counties would like a better mechanism for sharing bridge data with WSDOT and better access to WSDOT data about bridges within their jurisdiction that they don't have jurisdiction over.

### **Business Functions Using**

Public works, transportation operations and maintenance, emergency management, tribal governments

### **Source**

WSDOT Bridge Preservation Office, Seattle Department of Transportation

### **Specific Partners Use**

County and city governments, WSDOT, USGS, USFS, BLM, E-911

### ***BN: 16.0***

#### **Title**

Facilitate Developing Travel Demand Forecasting Models

#### **Description**

Travel demand forecasting is a process of building models to use in decision support. Currently MPOs build their own models. WSDOT needs to build a model that would connect to their models. It would require information on local, county and state roads, rail, air, ferry and transit routes. This would be used for long range planning. It would also be useful in analysis of "environmental justice" issues with transportation planning.

### **Business Functions Using**

Transportation planning, urban planning, private business planning, communication

### **Source**

WSDOT Planning Office, WSDOT Environmental Affairs Office, SFTA

### **Specific Partners Use**

County and city government, WSDOT, MPOs and RTPOs, Transit, SFTA, FHWA

### ***BN: 17.0***

#### **Title**

Building the Highway System Plan

#### **Description**

The agency builds the Washington Transportation Plan periodically. Part of it is the Highway System Plan (HSP). Developing the plan involves collecting all transportation data from all

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modes and identifying deficiencies based on service objectives and outcome statements. Data collected includes project information, proposals, locations, deficiencies and segments. Ideally they would like to include data collected from locals and counties so they can develop corridor plans and raw development plans. There could be land issues, modeling needs, new development needs and local transportation circulation issues that come into plan. Delay and deficiencies are measured based on all of this information and then the plan is developed.

### **Business Functions Using**

Transportation planning, urban planning, business development planning

### **Source**

WSDOT Planning Office, SFTA

### **Specific Partners Use**

County and city governments, WSDOT, Transit, SFTA, MPOs and RTPOs, FHWA

### ***BN: 18.0***

### **Title**

Representations with bi-directional carriageways

### **Description**

WSDOT Transportation Data Office locates features and other things along the roadway. There is currently great inaccuracy because the roadway is represented with one centerline and the actual routes that are separated and different in each direction are not accurately represented and lead to bad data when locating features and other things along the roadway. They need bi-directional carriageways with measurements in each direction.

### **Business Functions Using**

Transportation planning, transportation project scoping and design, public communication, transportation data collections, transportation maintenance, transportation operations

### **Source**

WSDOT Transportation Data Office

### **Specific Partners Use**

MPOs and RTPOs, WSDOT, city and county governments, SFTA

### ***BN: 19.0***

### **Title**

Collecting Collision Data and Locations



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### **Description**

The WSDOT Transportation Data Office collects data and performs collision reporting and tracking where collisions occur on specific highways. Eventually WSP and other police vehicles will be outfitted with GIS to report the location of collisions. The BIA is working with tribal nations to collect this data as well. Data used for analysis about problems that cause collisions.

### **Business Functions Using**

Transportation operations, maintenance, and planning organizations, police, emergency response, transit organizations

### **Source**

WSDOT Transportation Data Office, BIA, Makah Transportation Planning

### **Specific Partners Use**

Washington State Patrol, WSDOT, County and city governments, Transit Organizations, Tribal Nations

### ***BN: 20.0***

### **Title**

Providing Collision Data to Local Governments and Tribal Nations

### **Description**

The WDOT Transportation Data Office provides traffic accident and collision data to counties. They also provide history at intersections of local and county roads with state routes. There is a desire for this information on tribal lands as well. They provide data to MPOs and RTPOs for their models. All of this sharing could be facilitated through the Transportation Framework. Cities need this data.

### **Business Functions Using**

Transportation planners, transit, transportation data collections, transportation maintenance, transportation operations

### **Source**

WSDOT Transportation Data Office, Seattle Dept. of Transportation, Makah Transportation Planning

### **Specific Partners Use**

County and city governments, WSDOT, MPOs and RTPOs, Strategic Freight Planning, Transit Organizations, Tribal Nations

### ***BN: 21.0***

### **Title**

Work with HPMS/FC replacement

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### **Description**

The Highway Performance Monitoring System and Functional Classification Systems are maintained by WSDOT for the FHWA. This is database of all miles of public roads in the State. It is the basis for determining eligibility for Federal-aid funding for functional classification modifications and updates as well as the basis for designation of the National Highway system. WSDOT is mandated to maintain data about out all roads in both rural and urban areas and determine the functional usage of existing roads and streets. These systems get data from many of the partners that WA-Trans will. Aligning these systems with WA-Trans would prevent unnecessary duplication of data and effort. Collecting the same data once would facilitate sharing from local governments. There is an effort to replace them with a single system and this is where alignment might best be facilitated.

This effort wants a functional class map, which shows all roads and road miles included in the functional classifications sent to the Federal Government.

It is hoped that WA-Trans and HPMS/FC replacement will facilitate the exchange of road information between cities, counties and the State.

### **Business Functions Using**

Various levels of government transportation organizations

### **Source**

WSDOT Transportation Data Office, Seattle Dept. of Transportation

### **Specific Partners Use**

FHWA, WSDOT, County and City Governments, MPOs, RTPOs, CRAB, SFTA

### ***BN: 22.0***

### **Title**

Support the "Trip Planner" effort

### **Description**

The WSDOT Public Transportation Office is working on an effort called "Trip Planner" that involves providing the public with information about what transportation options are available from one location to another. It involves routing, transit information and is anticipated to be web based. Eventually would become a doorstep-to-doorstop trip planner anywhere in the state. At this point they are focusing on services for people who can't drive their own cars but it will expand to a much broader base. This project depends on a statewide base map with addressing and routing for multiple modes.

### **Business Functions Using**

Social services, chambers of commerce, employment organizations, Commute Trip Reduction, Transit systems

### **Source**

WSDOT Public Transportation Office, WSDOT Transportation Demand Management Office

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### **Specific Partners Use**

Kitsap Transit, Community Transit, WSDOT

### ***BN: 23.0***

#### **Title**

Communicate and Analyze Transportation Features in a Watershed

#### **Description**

Environmental analysis frequently is done on the basis of a watershed, which is not always bounded by a single transportation jurisdiction. This analysis requires all transportation features to be included. This includes footpaths, bike trails, forest roads, and other less-used transportation features.

#### **Business Functions Using**

Environmental assessment and permitting, transportation construction programs, transportation project funding, transportation planning

#### **Source**

WSDOT Environmental Affairs Office

### **Specific Partners Use**

County and city governments, WSDOT, WADNR

### ***BN: 24.0***

#### **Title**

Communicate and Analyze Habitat Along Roadways

#### **Description**

In order to evaluate the evolution of the habitat relationship with the roadways “habitat connectivity” infrastructure may need to be part of WA-Trans.

#### **Business Functions Using**

Environmental assessment and permitting, transportation construction programs, program management, transportation planning

#### **Source**

WSDOT Environmental Affairs Office

### **Specific Partners Use**

County and city governments, WSDOT, WADNR

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### ***BN: 25.0***

#### **Title**

Communicate and Analyze Park & Rides and Connecting Routes

#### **Description**

WA-Trans should include Park & Rides, including lights and pavement conditions by location; they need data regarding Park & Rides. Need to analyze direct access to and from Park & Rides to other systems. Not all Park & Rides belong to WSDOT or are maintained by them.

The City of Seattle Department of Transportation manages a car pool parking program that may also be useful as part of sharing data about Park & Rides.

#### **Business Functions Using**

Transportation planning, transit, transportation construction programs, commute trip reduction, employment organizations

#### **Source**

WSDOT Program Management, WSDOT Urban Corridors, WSDOT Transportation Demand Management Office, Seattle Department of Transportation

#### **Specific Partners Use**

WSDOT, MPOs and RTPOs, Kitsap Transit, Community Transit, county and city governments

### ***BN: 26.0***

#### **Title**

Communicating Project Plans with Public, Various Road Authorities and Other Stakeholders

#### **Description**

WSDOT Urban Corridors projects have co-lead agencies. The leads are jointly responsible for the project. These projects are multi-modal. They also are sharing data with differing levels of government and different modes. Generally hiring a contractor who collects the data for scoping does data collection and then it is thrown away. There is not a place to update data. Each project costs between \$15,000 and \$20,000.

Additionally there is a need to share Transportation construction project plans with the public and with developers. Providing maps with the data and showing it in relation to where they live/work has the most impact.

#### **Business Functions Using**

Transportation planning, public works, public communications, transit, transportation project funding

#### **Source**

WSDOT Urban Corridors, WSDOT Program Management

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### **Specific Partners Use**

County and city governments, WSDOT, Kitsap Transit, Community Transit, MPOs and RTPOs

***BN: 27.0***

### **Title**

Integrate Multi-modal Transportation Options

### **Description**

This was stated as “Integrating WSF terminal data with roads, bike paths, rails, bus systems, water-based travel that leads to ferry terminal including traffic data”. And “need to be able to evaluate how arterials and ferry terminals interface with the State roadway system and how traffic is moved between them”. This need could be extended to say that all modes need to be combined for analysis of transportation patterns for transportation planning.

### **Business Functions Using**

Transportation planning, transit

### **Source**

WSF Terminal Engineering, WSDOT Urban Corridors

### **Specific Partners Use**

WSDOT, MPOs and RTPOs, County and city governments, Kitsap Transit, Community Transit

***BN: 28.0***

### **Title**

Data for Terminal Planning Analysis and Communication

### **Description**

Washington State Ferries is considered part of the state highway system. When they are looking at modifying or building a terminal they need a great deal of data. They need to know the roads and other transportation converging on a location.

### **Business Functions Using**

Transportation planning, ferries planning

### **Source**

WSF Terminal Engineering

### **Specific Partners Use**

WSDOT

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### ***BN: 29.0***

#### **Title**

Notification of Ferry Neighbors

#### **Description**

WSF needs address and routing information for businesses and homes around ferry terminals for notification purposes when there is closure, noise or some special transportation issue.

#### **Business Functions Using**

Ferries operations, emergency management

#### **Source**

WSF Terminal Engineering

#### **Specific Partners Use**

WSDOT, King County Emergency Management

### ***BN: 30.0***

#### **Title**

Mapping, Analyzing and Communicating Traffic Flow

#### **Description**

WSDOT has an application on the Internet called the Puget Sound Traffic Flow Map, which gets heavy usage. It would be very good to expand the boundaries of this beyond the state highway system and show other congestion. The drivers don't care who is responsible for the road. They just want to know where to avoid. Specific information about freight flows would be very useful to freight and freight planning.

#### **Business Functions Using**

The public

#### **Source**

WSDOT IT (TRAC) Office, Seattle Department of Transportation, SFTA (for Freight Flows)

#### **Specific Partners Use**

County and city road departments, WSDOT, Kitsap Transit, Community Transit, SFTA

### ***BN: 31.0***

#### **Title**

Coordinated dispatch of on-demand transportation

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### **Description**

There is a need for social service providers to facilitate coordinated dispatch and scheduling for demand response rides provided for ADA individuals. There is a need to link trips on demand using a pool of different transportation providers and routes for a particular day so transportation can be arranged as needed with a single call. The idea is to provide a call center for this purpose.

### **Business Functions Using**

Social Services, public including disabled individuals and senior citizens

### **Source**

WSDOT Public Transportation Office

### **Specific Partners Use**

County and city social services, WSDOT

### ***BN: 32.0***

### **Title**

Drainage system features and routes from all roadways

### **Description**

There are many potential interfaces for drainage feature data to be shared between the WSDOT and county and city government organizations. When there is a chemical spill on the roadway local jurisdictions need to know the drainage so they can determine the impact to their water, lands and emergency services. Some of WSDOTs culverts and other drainage features cross county and municipal roads and their state of repair affects the roadway they cross. This information is also used to plan for emergencies with local fire and police. There is also county and municipal drainage that goes into WSDOT right-of-way, roadways and other transportation features that impact WSDOT maintenance. Another use of this information is during project scoping both by WSDOT and county and city public works. Drainage feature information is needed along the roadway and where it goes is also needed.

### **Business Functions Using**

Emergency management, environmental planning, environmental permitting, environmental management, transportation maintenance, transportation operations, transportation planning

### **Source**

WSDOT Maintenance and Operations

### **Specific Partner Use**

County and city public works, county and city emergency services, WSDOT, Department of Ecology

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### ***BN: 33.0***

#### **Title**

Inventory data of features along the roadway.

#### **Description**

This is a fixed Asset Inventory – GASB 34 Compliance (General accounting requirements for Road Authorities). While this is largely an internal function there are roadway features that belong to WSDOT that are located off the state highway system and off WSDOT right-of-way. Most freeway ramp intersections have one set of traffic signals owned by WSDOT and the other owned by the controlling local municipality or county. These items need to be located and this data shared. Also WSDOT make arrangements for municipalities to maintain features on some state routes through that city. An example of this is the service agreement with the city of Federal Way to maintain drainage features along SR99 through Federal Way. WSDOT needs to track maintenance of these items. There are also county and city features along the state road system that may require the same information for those agencies.

#### **Business Functions Using**

Transportation operations, transportation maintenance, asset management

#### **Source**

WSDOT Maintenance and Operations

#### **Specific Partner Use**

County and city public works, WSDOT

### ***BN: 34.0***

#### **Title**

Snow removal routes and features along the route

#### **Description**

WSDOT does snow removal work for the National Parks and State Parks. They have responsibilities regarding care of specialized guard rails along the routes that are owned and maintained by the parks service but can be affected by the plowing. Tracking these routes and features and sharing data with the State and National Parks to do so would be useful.

#### **Business Function Using**

Road maintenance, natural resource management

#### **Source**

WSDOT Maintenance and Operations

#### **Specific Partner Use**

National Parks Service, Washington State Parks, WSDOT



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### ***BN: 35.0***

#### **Title**

Information about activities on all roadways to answer customer calls

#### **Description**

Many taxpayer and others with questions are comments about roads don't know about local transportation organization but they do call WSDOT or vice versa. It would be very helpful to have data about roads closing, contacts in other organizations, roadways and features for answering questions without regard to jurisdiction.

#### **Business Function**

Public communications, chambers of commerce, transportation maintenance, transportation operations

#### **Source**

WSDOT Maintenance and Operations

#### **Specific Partners Use**

County and city governments, WSDOT

### ***BN: 36.0***

#### **Title**

Mapping using Address Matching

#### **Description**

A fundamental use of the transportation network will be location determination by address. Virtually every agency/party employing GIS technology has some need to geo-code data to a street address. Many address data structures exist. A viable and widely employed model might be that used by the U.S. Census Bureau for TIGER.

#### **Business Functions Using**

Transit, city and county government, emergency management and emergency response, economic development, transportation and public data collection and analysis, transportation planning, public communication, environmental management, utilities

#### **Source**

Community Transit, Seattle Public Utilities

#### **Specific Partners Use**

Transit, City and County Government, King County Emergency Management Washington E-911, Bureau of Census, WSDOT Environmental Affairs Office, WSDOT Public Transportation Office, WSDOT Transportation Demand Management Office

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### ***BN: 37.0***

#### **Title**

Map Production

#### **Description**

Organizations must meet the need to produce basic cartographic products. This functionality includes geometry, accuracy, and topological integrity.

#### **Business Function Using**

Cartography, public records

#### **Source**

County and Local Government

#### **Specific Partners Use**

All

### ***BN: 38.0***

#### **Title**

Roads Inventory to CRAB (County, Tribal, City, State)

#### **Description**

County Road Authorities maintain records of maintained roads with inventory information (pavement type, pavement width, functional classification, ADT) that is used to determine gas tax allocation.

BIA is also collecting an inventory of Tribal Roads

City Roads, County and State inventory is needed for Federal Classification

#### **Business Function Using**

Transportation planning, transportation project scoping and design, transportation construction projects, transportation data collections, transportation project funding

#### **Source**

County Local Government

#### **Specific Partners Use**

CRAB, County Government, WSDOT (TDO, other), FHWA, BIA, Tribal Governments, SFTA

### ***BN: 39.0***

#### **Title**

Event Location Analysis and Mapping (Geocoding/Address-matching)

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### **Description**

Various event databases are maintained which reference street addresses or Road Number and Milepost. Mapping and analysis of these events is critical to management of transportation resources.

### **Business Function Using**

Transportation planning, transportation project scoping and design, transportation construction projects, transportation data collections, transportation project funding

### **Source**

County Local Government

### **Specific Partners Use**

CRAB, County Government, City Government, WSDOT, Public Access, SFTA

### ***BN: 40.0***

### **Title**

Public Access to Records

### **Description**

County Road Authorities are statutorily required to keep records of all roads within their jurisdiction, and to provide those records to the public.

### **Business Function Using**

Transportation operations, transportation data collection, transportation maintenance, asset management

### **Source**

County Local Government

### **Specific Partners Use**

County Government, WSDOT, BIA, Tribal Governments

### ***BN: 41.0***

### **Title**

Coordinate Ferries Schedules with Traffic Management

### **Description**

The City of Seattle Department of Transportation currently has some coordination of traffic lights with ferries arrival on Coleman Dock. It would be useful to expand this to all ferry routes and have this integrated into any routing done in WA-Trans.

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### **Business Function Using**

Transportation operations, transportation planning, emergency management and response

### **Source**

Seattle Department of Transportation

### **Specific Partners Use**

City and County Public Works and Departments of Transportation, WSDOT, King County Emergency Management, Washington E-911.

### ***BN: 42.0***

### **Title**

Expansion of Lifelines Statewide

### **Description**

King County Emergency Management has developed a GIS in support of “lifelines”. A lifeline is a combination of critical facilities (hospitals, schools, etc.) connected by routes, which can be repaired quickly (within 24 hours) with local things. The goal is that all parties have the same priorities after an emergency event. They need to know where trains are and ferries are as part of this effort.

### **Business Function Using**

Emergency management, emergency response, transportation operations, transportation maintenance, police, fire

### **Source**

King County Emergency Management

### **Specific Partners Use**

King County Emergency Management, Washington State E-911, WSDOT, City and County Public Works and Transportation Departments

### ***BN: 43.0***

### **Title**

Determination of Evacuation Routes

### **Description**

In a major emergency evacuation routes must be identified and communicated. In planning for an emergency potential evacuation routes must be determined. Software must support changing these routes based on type of emergency, location of emergency and condition of the evacuation routes.

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### **Business Function Using**

Emergency management, emergency response, transportation operations, transportation maintenance, police, fire, public transportation, public communication

### **Source**

King County Emergency Management

### **Specific Partner Use**

King County Emergency Management, Washington E-911, WSDOT, City and County Public Works and Transportation Departments

### ***BN: 44.0***

### **Title**

Access into a Disaster Area

### **Description**

In a disaster or major emergency it is necessary to bring people and supplies into the disaster zone. For Washington this can include over mountain passes in snow. Planning for such an even includes modeling possible routes for bringing in emergency assistance, National Guard, FEMA and other organizations needed. Then in an actual event determination of which routes to use and communication of such routes is necessary. WA-Trans can facilitate determining access into a disaster area.

### **Business Function Using**

Emergency management, emergency response, military, transportation operations, transportation maintenance

### **Source**

King County Emergency Management

### **Specific Partner Use**

King County Emergency Management, Washington E-911, WSDOT, City and County Public Works and Transportation Departments

### ***BN: 45.0***

### **Title**

Crossing Safety

### **Description**

Using information about specific characteristics about grade crossings, roadway characteristics, traffic counts, and train operations, WUTC and WSDOT Staff are able to conduct accident prediction and other hazard analysis for resource allocation and safety improvements. The data will also assist field inspectors to review crossings for safety improvements, including signal upgrades, crossing surface needs, and related regulatory

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duties. Crossing defects can be tracked, and railroad company repair performance can be analyzed.

### **Business Functions**

Safety analysis, inspection priorities, resource allocation, compliance actions

### **Source**

Washington Utilities and Transportation Commission

### **Specific Partners Use**

State and Local Governments

## ***BN: 46.0***

### **Title**

General Railroad Safety Inspections

### **Description**

Using information about rail line locations, commodities hauled, train counts, and other operational information, inspections involving hazardous materials, track, and operation practices can be targeted, planned and optimized. Accidents and HAZMAT releases can be tracked to identify safety problems.

### **Business Functions**

Safety analysis, inspection planning, hazard reduction

### **Source**

Washington Utilities and Transportation Commission

### **Specific Partners Use**

State and Local Governments

## ***BN: 47.0***

### **Title**

Trespass Reduction

### **Description**

Using transportation system information including track location and operations, trespass accidents can be plotted, and areas targeted for engineering, enforcement and education efforts.

### **Business Functions**

Safety analysis, hazard reduction

### **Source**

Washington Utilities and Transportation Commission

### **Specific Partners Use**

State and Local Governments

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### ***BN: 48.0***

#### **Title**

Accurate centerline and right-of-way line work.

#### **Description**

The WUTC issues Certificates of Public Convenience and Necessity. These certificates are a property right. They are described in metes and bounds, and roads may be the boundary used in the legal description. It is very important that the location of the line work is accurate.

#### **Business Function Using**

Property right descriptions of franchise service areas.

#### **Source**

WUTC Solid Waste section

#### **Specific Partners Use**

State and Local Governments

### ***BN: 49.0***

#### **Title**

Location of specific addresses (geo-coding).

#### **Description**

The WUTC-regulated companies can provide solid waste services within specific geographic areas. The location of a specific address is needed to determine which company has the rights to service at a particular location.

#### **Business Function Using**

Consumer affairs, public affairs, customer notice, compliance, accounting/auditing, policy.

#### **Source**

WUTC Solid Waste section

#### **Specific Partners Use**

State and Local Governments

### ***BN: 50.0***

#### **Title**

Who can provide utility services at a specific location? (Geo-coding)

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### **Description**

The WUTC regulates multiple utility and transportation companies. Consumers often inquire about which companies provide services where they live. A geo-coded street layer would allow consumers to get answers to those questions.

### **Business Function Using**

Public.

### **Source**

WUTC Solid Waste section

### **Specific Partners Use**

State and Local Governments

### ***BN: 51.0***

### **Title**

Street Names.

### **Description**

The WUTC issues Certificates of Public Convenience and Necessity. These certificates are a property right. They are described in metes and bounds, and roads may be the boundary used in the legal description. We need street names in the roads layer so we can describe the boundary accurately.

### **Business Function Using**

Property right descriptions of franchise service areas.

### **Source**

WUTC Solid Waste section

### **Specific Partners Use**

State and Local Governments

### ***BN: 52.0***

### **Title**

Unimproved or Temporary Roads

### **Description**

The WUTC Pipeline Safety Division is required under RCW 81.88.080 to assist local governments in obtaining hazardous liquid and gas pipeline location information and maps. We are also obligated to develop a GIS that is sufficient to meet the needs of first responders.



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### **Business Function Using**

Pipeline access points, construction inspections, and possible evacuation routes, emergency management, emergency response, fire, and police

### **Source**

WUTC Pipeline Safety Division

### **Specific Partners Use**

State and Local Governments

***BN: 53.0***

### **Title**

Navigable Waterways and Port Facilities

### **Description**

Considerable freight traffic moves throughout Washington's navigable waterways (Columbia and Snake River system, ocean ports in Seattle and Tacoma), thus complementing Washington's efficient multi-modal transportation system (truck, rail, barge). Much of this freight, especially for traffic along the Snake and Columbia River system, is traffic, which would otherwise be shipped via rail or truck when barge access is constrained from lock maintenance, or river drawdowns thus adding to an already constrained highway system. WSDOT planners and freight policy analyst could benefit from the analytical capabilities of a GIS coverage of all the state's navigable waterways, locks and port facilities. This would be especially useful identifying shipper costs and highway impacts due to river passage restrictions.

### **Business Function Using**

Transportation planning, freight planning, freight mobility, freight management

### **Source**

WSDOT, SFTA (Snake and Columbia River System)

### **Specific Partners Use**

WSDOT (Freight Policy and Planning, Transportation Planning), SFTA

***BN: 54.0***

### **Title**

Geo-Coded Freight Truck Flows

### **Description**

A statewide freight origin and destination truck survey was conducted in 1993-1994 and again in 2002, at 30 selected sites across the state. Detailed information concerning individual truck-trips, commodities, truck configurations, origins, destinations and specific routes for all

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highways will be incorporated into a GIS and available for highway planners, modelers, and policy analyst.

### **Business Function Using**

Transportation planning, freight planning, freight mobility, freight management

### **Source**

WSDOT, SFTA

### **Specific Partners Use**

WSDOT (Freight Policy and Planning), FMSIB, SFTA

### ***BN: 55.0***

### **Title**

Freight Goods and Transportation System Updates

### **Description**

WSDOT must comply with federal (FHWA) requirements under the Highway Performance Monitoring System and state legislation (RCW 47.05.021) and identify Washington's freight and goods network and the usage of this network over time. Truck freight data is captured for state highways (1,450 count locations), county roads (CRAB), and city streets (AWC) and compiled to develop the state level freight planning and forecasting model framework and provide the different tonnage classifications (T1-T5) for all highways. Highway planners, freight policy analyst, counties, cities and other transportation and economic development interests utilize this information.

### **Business Function Using**

Transportation planning, freight planning, freight mobility, freight management

### **Source**

WSDOT, SFTA

### **Specific Partners Use**

WSDOT (Freight Policy and Planning), FMSIB, SFTA

### ***BN: 56.0***

### **Title**

Washington State Transportation Data for the National Map

### **Description**

The USGS National Map Project needs the most efficient way to access data. Currently the data the National Map Project will use will come from local data sources with individual agreements for each. WA-Trans would maintain those agreements and provide one source for the

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transportation data for the National Map, thus simplifying the process and cost of gathering and maintaining the data significantly.

### **Business Function Using**

National map production, general public, businesses of all sorts' nationwide, tourists

### **Source**

USGS

### **Specific Partners Use**

USGS, All Partners, General Public

### ***BN: 57.0***

### **Title**

Tracking Fisheries Information Related to Road/Water Structure

### **Description**

The IRICC Hydrography and Transportation teams identified a business requirement for tracking fisheries information related to road/water structures. This information relates to fish passage regarding roads structures and stream intersections. This information would be tied to dams, culverts, crossings, etc. Fisheries biologists have not specifically identified what this information would be, but a general understanding of its nature is generally understood at this time.

The IRICC Hydrography and Transportation teams discussed which coverage would be better suited to tie this to. The decision involved several components, but the fact that the transportation data would be more accurate provided the best reason to hold this cross-coverage information there.

### **Business Function Using**

Fish management, hatcheries, environmental assessment, and environmental management

### **Source**

Regional Ecosystem Office

### **Specific Partners Use**

US Forest Service, US Department of Interior

### ***BN: 58.0***

### **Title**

Access to historical versions of WA-Trans

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### **Description**

For comparison purposes there is a need to store versions of WA-Trans for each specific time period to facilitate historical modeling, comparisons and analysis.

### **Business Function Using**

Transportation planning, transportation data collection

### **Source**

Puget Sound Regional Council

### **Specific Partners Using**

MPOs and RTPOs, WSDOT

***BN: 59.0***

### **Title**

Compatibility with Related Transportation Frameworks

### **Description**

WA-Trans must be able to exchange data with Transportation Frameworks from Oregon, Idaho and British Columbia, Canada. It must also be compatible with the GeoSpatial One-Stop Transportation Model.

### **Business Function Using**

Inter-state transportation planning, data communication, transportation data collection, transportation project funding

### **Source**

Bureau of Transportation Statistics, Oregon Department of Transportation, Interregional Information Coordinating Council, USGS

### **Specific Partners Using**

WSDOT, FHWA, USFS, USGS

***BN: 60.0***

### **Title**

WA-Trans Metadata

### **Description**

Federal Geographic Data Committee Standard for describing data geospatial data. This is data that describes the data content of WA-Trans, including data quality, data sources, entities, attributes, applicable time periods of content, and processing steps.

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### Business Function Using

All

### Source

Literature

### Specific Partners Using

All

### **BN: 61.0**

### Title

Designate Indian Reservation Roads Explicitly

### Description

Federal law requires consultation with tribal nations in long range transportation planning. Additionally it can be cost beneficial to coordinate planning, development, construction and maintenance of Indian Reservation Roads (IRR) and other local, county and state roads as they are frequently shared and have similar needs. Using WA-Trans to illustrate that would facilitate the consultation process and coordination efforts.

### Business Function Using

Transportation planning, transportation project funding, transportation project scoping and design, transportation maintenance, transportation operations.

### Source

EWU TTAP, Makah Transportation Planning, BIA

### Specific Partners Using

WSDOT, County and Local Governments, MPOs and RTPOs, Tribal Nations, BIA

### **BN: 62.0**

### Title

Identifying Alternate Sources for Roads Funding

### Description

There are a variety of sources of funding for work on roads depending on where they are located. If the roads in WA-Trans were categorized based on what type of funding they were eligible for there may be opportunities for funding that are not currently exploited. These include: State, FHWA, Public Lands Highways, Park Roads and Parkways, IRR, and National Wildlife Refuge System under the Federal Lands Highway Program.

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### **Business Function Using**

Transportation planning, transportation project funding, transportation project scoping and design, transportation maintenance, transportation operations.

### **Source**

EWU TTAP, Makah Transportation Planning, BIA

### **Specific Partners Using**

WSDOT, County and Local Governments, MPOs and RTPOs, Tribal Nations

### ***BN: 63.0***

### **Title**

Identification of Potential Partners in Transportation Planning

### **Description**

Various road authorities and other interested parties can assist with planning and funding of roadwork. Many of these parties could be identified easily if road authorities were clearly identified with WA-Trans.

### **Business Function Using**

Transportation planning, transportation project funding, transportation project scoping and design, transportation maintenance, transportation operations.

### **Source**

EWU TTAP, Tribal Transportation Planning Meeting

### **Specific Partners Using**

WSDOT, County and Local Governments, MPOs and RTPOs, Tribal Nations

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### Data Needs

Business needs were expressed which involved the use of this data in relationship to the transportation network across the State. These data items may not, in some cases should not, be part of WA-Trans. However WA-Trans may facilitate analysis by working with this data to assist in meeting specific business needs.

**Data Category** – This field is a high level category of various data elements which allows for development of “themes” of data which can be geocoded into different layers in a GIS.

**Specific Data** – Individual data elements, which relate to the category that stakeholders want to see in relation to the transportation network. No detail is provided about these elements at this point.

**Source of Need** – The original organization requesting this data with the transportation data.

**Business Function** – The business function which may use this data or may contribute this data.

**Framework Theme** – Where a framework theme in Washington State has the data within its scope it is identified here.

<b><i>Data Category</i></b>	<b><i>Specific Data</i></b>	<b><i>Source of Need</i></b>	<b><i>Business Function</i></b>	<b><i>Framework Theme</i></b>
Utilities	Gas line locations	WSDOT Project Engineers, WSDOT ITS (TRAC), WSDOT State Design Office, BOC	Transportation Construction	None
Utilities	Phone power lines	WSDOT Project Engineers, WSDOT ITS (TRAC), WSDOT State Design Office, BOC	Transportation Construction	None
Utilities	Wireless transmission	WSDOT Project Engineers, WSDOT ITS (TRAC), WSDOT State Design Office	Transportation Construction	None
Utilities	Date and location about digging	WSDOT Olympic Region H&LP Engineer	Transportation Construction and Maintenance	None
Parcel Data	Ownership along roadways,	WSDOT Project Engineers,	Transportation Construction,	Cadastral?

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<b>Data Category</b>	<b>Specific Data</b>	<b>Source of Need</b>	<b>Business Function</b>	<b>Framework Theme</b>
	railways, ferry terminals	WSDOT Rail Office, WSDOT Bridge Preservation Office	Maintenance and Operations, Emergency Management	
Parcel Data	Homes and businesses along projects and by ferry terminals and Geocoding to census geography	WSDOT Urban Corridors, WSF Terminal Engineering, BOC	Transportation Construction, Transportation Planning, Counties and Cities, Public	Cadastral?
Land Use	Zoning data including landmarks such as cemeteries, parks, military land	WSDOT Project Engineers, WSDOT Environmental Affairs Office, WSF Terminal Engineering, WSDOT Planning Office, BOC	Transportation Planning, Environmental Assessment, Transportation Construction, Commute Trip Reduction, Transit	None
Land Use	Urban Growth Boundaries	WSDOT Project Engineers, WSDOT Environmental Affairs Office, WSF Terminal Engineering, WSDOT Planning Office, BOC	Transportation Planning, Environmental Assessment, Commute Trip Reduction, Transit, Counties and Cities	None
Land Use	Boundaries of "critical areas" such as burial grounds on tribal land	WSDOT Olympic Region Design, WSDOT Environmental Affairs Office	Transportation Planning, Environmental Assessment, Transportation Construction, Counties and Cities	None
Land Use	Historic sites (historic districts, bridges, and public lands	WSDOT Environmental Affairs Office	Transportation Planning, Environmental Assessment,	None



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<b>Data Category</b>	<b>Specific Data</b>	<b>Source of Need</b>	<b>Business Function</b>	<b>Framework Theme</b>
			Transportation Construction, Counties and Cities	
Land Use	Community centers, school district locations and boundaries, weigh stations along roadways	WSDOT Program Management, WSDOT Design Office, BOC	Transportation Planning, Transportation Construction, Transit, Commute Trip Reduction, Counties and Cities	None
Land Use	Shore Master Permits along ferry terminals	WSF Terminal Engineering	Transportation Planning and Construction, Environmental Assessment	None
Land Use	Comprehensive along Ferry terminals	WSF Terminal Engineering	Transportation Planning and Construction, Environmental Assessment	None
Land Use	Structure centroids or footprints assist BOC with ability to incorporate GS technology into field enumeration activities.	BOC	Census activities	None
Environmental	Location of well headers	WSDOT Olympic Region Design	Transportation Construction, Environmental Assessment	None
Environmental	Delineated wetlands location and buffer and environmental classification in project area or along roadway	WSDOT Olympic Region Design, WSDOT Rail Office, WSDOT Urban Corridors, WSDOT Maintenance and	Transportation Construction, Environmental Assessment, Natural Resource Management	Hydrography

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<b>Data Category</b>	<b>Specific Data</b>	<b>Source of Need</b>	<b>Business Function</b>	<b>Framework Theme</b>
		Operations		
Environmental	Creek, stream, and river location and buffer and environmental classification in project area or along roadway, used as boundaries by BOC	WSDOT Rail Office, WSDOT Urban Corridors, WSDOT Olympic Region Design, WSDOT Maintenance and Operations, BOC	Transportation Construction, Environmental Assessment, Natural Resource Management	Hydrography
Environmental	Storm water treatment facilities and conveyances	WSDOT Olympic Region Design, WSDOT Environmental Affairs Office	Transportation Construction, Environmental Assessment, private business	None
Environmental	Drainage onto and off of project area	WSDOT Environmental Affairs Office	Transportation Construction, Environmental Assessment, Natural Resource Management	Hydrography
Environmental	100 year flow of water crossings on project areas	WSDOT Environmental Affairs Office, WSDOT State Design Office	Transportation Construction, Environmental Assessment	Hydrography (potential/future)
Environmental	Species and natural resources around a ferry terminal	WSF Terminal Engineering	Transportation Construction, Environmental Assessment, Natural Resource Management	None
Environmental	Topographic and Bathymetric Data around ferry terminals	WSF Terminal Engineering	Transportation Construction, Natural Resource Management	Orthophoto
Economic Data	Business and Industry	WSDOT Planning Office,	Transportation Planning,	None

# WA-Trans Business Needs Document

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<b><i>Data Category</i></b>	<b><i>Specific Data</i></b>	<b><i>Source of Need</i></b>	<b><i>Business Function</i></b>	<b><i>Framework Theme</i></b>
	Locations along routes	WSDOT Transportation Demand Management Office	Transit, Commute Trip Reduction, Transportation Construction, Environmental Assessment	
Economic Data, Parcel Data, Land Use Data	Locations of social service providers, employment centers, medical care, day care providers, individuals using social services and transit routes	WSDOT Public Transportation Office	Transit, County, City, and State Social Service Providers	Cadastral? (Partially)
Transportation Data	Road signal locations	WSDOT Olympic Region H&LP Engineer	Transportation Planning, Transportation Construction, Transit, Route Planners, Emergency Management, Counties and Cities	None
Transportation Data	Structures involved in collisions	WSDOT Olympic Region H&LP Engineer, Seattle DOT	Transportation Planning, Transportation Construction, County and Cities	None
Transportation Data	Collision locations	WSDOT Planning Office, WSDOT Transportation Data Office, Seattle DOT	Transportation Planning, County and Cities	None
Transportation Data	Various structures on county and cities roads (tunnels, bridges)	WSDOT Bridge Preservation Office, Seattle DOT	Counties, Cities, Emergency Management,	None

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<b>Data Category</b>	<b>Specific Data</b>	<b>Source of Need</b>	<b>Business Function</b>	<b>Framework Theme</b>
			Transportation Planning, Freight	
Transportation Data	Traffic data for all modes including walking, bus, rails, water based travel, bikes, roads leaving state routes to arterials	WSDOT Urban Corridors, WSF Terminal Engineering, WSDOT Transportation Demand Management Office, Seattle DOT	Transportation Planning, Transportation Construction, Cities and Counties	None
Transportation Data	Pedestrian accident location data including: route location, road condition, traffic volume, speed, marked and unmarked cross walks, driveway locations, types of injury, medians, left turn lanes	WSDOT Highways and Local Programs	Transportation Planning, Cities and Counties, Transportation Maintenance and Operations	None
Transportation Data	Railroad crossing data including: safety rating, status of rail line at crossing (active, inactive) rate of train crossing, time of day of crossings, average daily traffic at crossings, ownership of lines	WSDOT Rail Office, WSDOT Bridge Office, Seattle DOT	Transportation Planning, Transportation Maintenance and Operations, Freight, Counties, Cities, Emergency Management	None
Transportation Data	Road locations	Pierce County, WUTC	All	None
Transportation	Road ownership	IRICC Core	Transportation	None

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<b><i>Data Category</i></b>	<b><i>Specific Data</i></b>	<b><i>Source of Need</i></b>	<b><i>Business Function</i></b>	<b><i>Framework Theme</i></b>
Data	and management information (sometimes called road authority) including owner level, owner name, manager level, manager name	Data Standards (IRICC Roads Committee)	Maintenance and Operations, Environmental Assessment and Modeling, Freight, Federal Land Management	
Transportation Data	Road Functional Classification, Functional Type	IRICC Core Data Standards (IRICC Roads Committee)	DOTs, county and local road management at all levels, Land Management at all levels	None
Transportation Data	Road quality and use information including Road Status, Road Surface Type	IRICC Core Data Standards (IRICC Roads Committee)	DOT's, county and local road management at all levels, land management organizations at all levels	None
Transportation Data	Address range on road segments	Pierce County, WUTC, Seattle Public Utilities	Environmental Assessment, County and local governments, Emergency management	None
Transportation Data	Routing System	Pierce County, City of Tacoma, Seattle Public Utilities	E-911, Local and County Governments	None
Transportation Data	CRIS characteristics data on roads that includes (type, name, width, functional class, speed limit, etc.)	Pierce County	Transportation Planning, Transportation Analysis, MPO, County and Local Public Works	None

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<b><i>Data Category</i></b>	<b><i>Specific Data</i></b>	<b><i>Source of Need</i></b>	<b><i>Business Function</i></b>	<b><i>Framework Theme</i></b>
Transportation Data	Transportation Plans including the STIP, various TIPs and Tribal TIPs	EWU TTAP, Makah Transportation Planning	Transportation Planning, Transportation Funding	None
Transportation Data	Designators for roads from the FHLP including Indian Reservation Roads	EWU TTAP, Makah Transportation Planning	Transportation Planning, Transportation Funding, Transportation Maintenance and Operations	None
Census	Population of communities through which state highways pass.	WSDOT State Design Office,	Transportation Planning, Transportation Construction	None